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Notes on Breeding Choruses of Two Anurans *(Scaphiopus holbrookii, Pseudacris streckeri)* in Southern Illinois

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The northwestern edge of the range of the eastern spadefoot toad *(Scaphiopus holbrookii)* extends into extreme southern Illinois (Smith 1961) . The species is presumed rare in this part of its range because it is known by a small number of specimens from only seven localities (Smith 1961 ; Brandon and Austin 1966 ; Thompson et al. 1968) . At each of four of these localities only one specimen was found (Elder 1945 ; Smith 1948 ; Brandon and Austin 1966; Thompson et al. 1968) . It is thus of interest that we encountered large breeding choruses of *S. holbrookii* near Olive Branch, Alexander County.

The first chorus was found on the evening of 19 April 1973 just off Tamms Road, 1.4 mi NE of its junction with Hwy. 3 (Fig. 1) . We estimated that 200 males were calling. Air temperature was 16.1 C, water temperature was 16.0 C and the mean cloacal temperature for five males was 15.9 C. Three specimens were collected and later preserved. As we proceeded east on a county road toward Unity, many males and females were found on the road. Three additional choruses were located 0.3, 0.5 and 1.2 miles east of the first chorus (Fig. 1) . We estimated that 40, 25 and 100 males were calling in these choruses, respectively. During the day of 19 April, it had rained heavily and much of Alexander County was flooded. Spadefoots were calling in flooded wheat fields and ditches. The nearest record for *S. holbrookii* is 2-4 miles south on Horseshoe Lake Island where only one specimen was collected (Elder 1945) .

The chorus frog *Pseudacris streckeri* is known in Illinois only from relict populations along the Illinois River (Smith 1966) , and southwest of Horseshoe Lake on the Eugene Willis farm (Holman et al. 1964) . We also found this species calling on 5 March 1971 in Miller City in a pond between the church and railroad tracks. On 19 April 1973 we found male *P. Streckeri* calling in the easternmost *S. holbrookii* chorus discussed above, and approximately 0.2 miles north of the smallest *S. holbrookii* chorus (Fig. 1) . Small numbers of male *P. streckeri* (< 10) were calling in both choruses. These new records are approximately 5.0 and 5.3 miles NE of the formerly reported Willis farm locality.

During the evening of 19 April, we also traveled along roads in the vicinity of the *S. holbrookii-P. streckeri* choruses (NE and SW on

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Tamms Rd. ; NW and SE of Olive Branch on Hwy. 3 ; on the county road toward Unity; on Promised Land Rd. ; on the Miller City-Olive Branch Rd.) and frequently stopped to listen for calling anurans. No other *S. holbrookii* or *P. streckeri* were heard. The next morning we examined the soils at the localities visited the previous night. At the locations of the *S. holbrookii-P. streckeri* choruses the soil was very sandy, whereas in the surrounding areas the soil had a heavier clay-like texture.

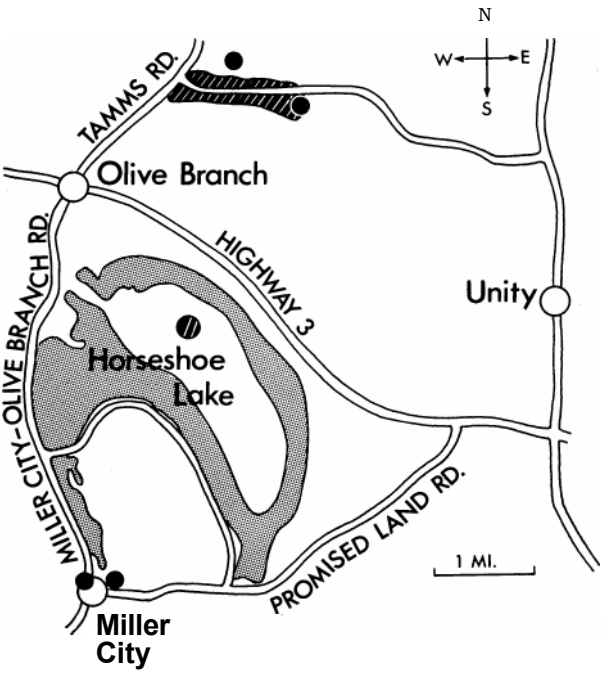

Fig. 1 Distributional Records for *Scaphiopus holbrookii* and *Pseudacris streckeri* ***in*** **the** Vicinity of Horseshoe Lake, Alexander Co., Illinois. Diagonally lined areas designate *S. holbrookii;* darkened circles indicate *P. streckeri.*

Thompson et al. (1968) also noted that the soil was sandy at the Pope Co., Ill. locality for *S. holbrookii,* and Wasserman (1958) pointed out that the species is generally found in areas of sandy soil. *P. streckeri* is also found only in sand prairies in the midwest (Smith 1966) and this species showed a highly significant selection of sand instead of sod when placed in a discrimination situation (Brown et al. 1972) . Both species are fossorial (Wasserman 1958 ; Brown et al. 1972) and it would presumably be easier for them to burrow in sand than in heavier soils. Brown et al. (1972) pointed out that the availability and sand is probably a factor limiting the distribution of relict populations of *P. streckeri.* Likewise, lack of sandy soil may be an important factor restricting the

distribution of *S. holbrookii* on the northwest edge of its range in southern Illinois.

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